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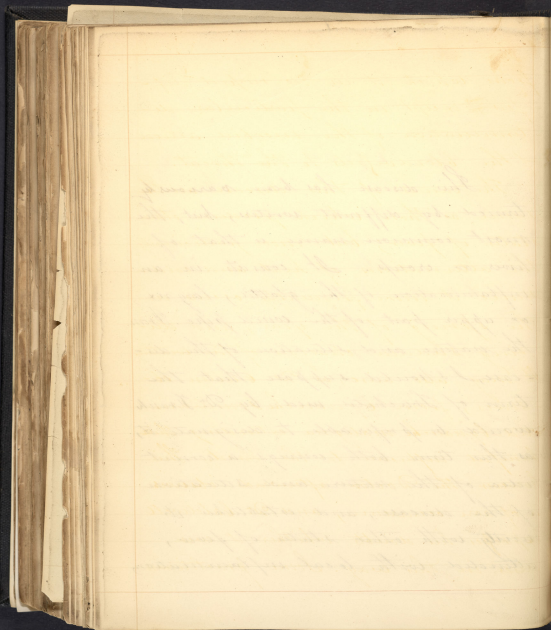
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Present March 7<sup>th</sup> 1826

An Essay  
on  
Cyanotic Tracheitis,  
by  
Jacob Baughman  
of  
Pennsylvania.



This disease has been variously termed by different writers, but, the most common name is that of hoarseness or croup. It consists in an inflammation of the glottis, larynx or upper part of the wind pipe. From the nature and situation of the disease, I should suppose that the term of Trachitis used by Dr. Frank would be preferable to designate it, as this term both conveys a correct idea of the nature and situation of the disease, and establishes its unity with other states of fever, attended with local inflammation,





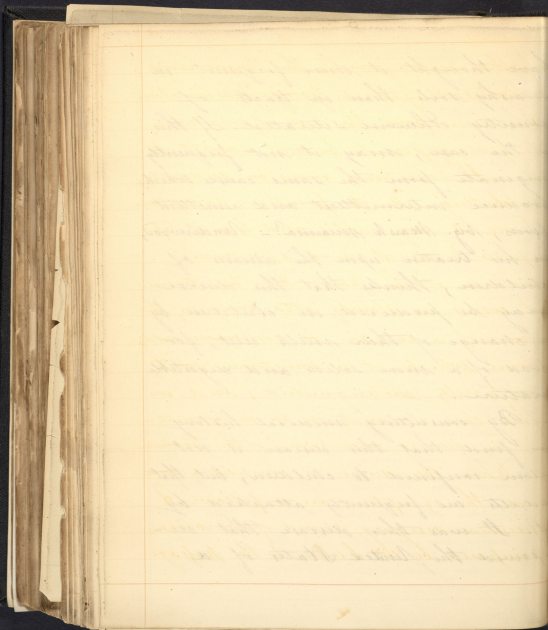
from which it in no respect differs, except in the particular determination of the morbid action of the bloodvessels to the throat.

The causes of this disease are the same as those which produce other states of fever; but more particularly the alternations of heat and cold. Hence it more frequently occurs in the spring of the year, and during sudden changes of the weather. It may also arise, as Dr Cullen observes, from *Cynanche Tonsillaris* and *Cynanche maligna* extending their baneful influence to the throat. This however the Doctor afterwards observes is of rare occurrence; and Dr Caldwell expresses his doubts whether it ever arises in this way. Some practitioners



have thought it more frequent in marshy soils than in tracts of country otherwise situated. If this is the case, may it not frequently originate from the same causes which produce intermittent and remittent fevers, viz. Marsh miasma? - Underwood, in his treatise upon the diseases of children, thinks that this disease may be produced in children, by a change of their milk diet, for food of a more solid and digestible nature.

By consulting medical history we find that this disease is not alone confined to children, but that adults are frequently attacked by it. It was this disease that depopulated the United States of a



father and friend, the brave and  
illustrious General George Washington.  
Children from the age of one year  
to five, appear to be most subject to  
it. It sometimes comes on suddenly,  
exhibiting all its peculiar symptoms  
from its very onset; and here it ap-  
-pears to consist in a spasmodic  
action of the parts. At other times  
it comes on slowly attaching in the  
form of a catarrh, or common cold,  
from which it is sometimes with  
difficulty distinguished; and in  
this case it consists in an inflammation  
of the lining membrane of the trachea.

When this disease is completely form-  
-ed, the symptoms are as follow. A  
peculiar ringing sound of the voice,  
compared by Dr. Cullen to the passage



of air through a brazen tube, or by others to the crowing of a young cock. There is a hoarseness both in speaking and coughing, a difficult sonorous respiration attended with a sense of stricture and pain about the larynx; the eyes are red, the face is flushed, and as the difficulty of breathing increases, becomes swelled, and of a purplish colour, in consequence of the return of blood from the head being in some measure prevented, by the accumulation of that fluid in the right cavities of the heart, and pulmonary system; it is frequently attended with a dry cough, unaccompanied with any expectoration; but if any matter be ejected or spit up, it either has a purulent appear-

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ance, or very much resembles detached portions of membrane, which upon dissection is found lining the internal surface of the trachea. This cough has mostly from its very commencement that peculiar shrillness which is so characteristic of this disease. — When we come to examine the internal fauces of a patient labouring under this disease, a redness and even a swelling of the parts will be evident; but in many cases there will be no appearance of inflammation and tumefaction, but frequently there will be a matter resembling pus, adhering to the internal surface, not unlike that ejected by coughing. These symptoms do not continue long before the pulse be-



comes frequent, strong and hard; the patient is troubled with pain in the head; becomes restless with a hot parched skin, attended with much thirst, white and often foul tongue. The urine is generally discharged in small quantities and with much difficulty, it has generally a limpid appearance. As the disease progresses it is evacuated in large quantities, is turbid; and a favourable termination approaching, generally deposits a copious sediment.

The bowels in this disease, as in other inflammatory fevers, become costive, and somewhat distended with flatus. If the symptoms prove obstinate, the pulse, which was <sup>before</sup> hard and vigorous, begins to



lose its strength and tension, becomes extremely weak and, as the fatal termination approaches, remarkably frequent. "In Cyanotic Tracheitis, (observes Dr Wilson) as in most other phlegmasiae, however alarming the other symptoms of fever may be, there is seldom any delirium. The patient generally retains his senses to the last, except that a degree of coma frequently supervenes." If the symptoms do not remit ~~remot~~, unless they be very mild, the patient seldom survives more than three or four hours, or even less, from the commencement of the attack.

The symptoms which denote approaching dissolution are the following. The mouth becomes very foul; the respiration more hurried, small and dif-



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-ficult; the restlessness and dejection increase; and under these circumstances that species of delirium, which is most nearly allied to coma, sometimes supervenes, the patient seeming stupid & frequently muttering to himself with marks of great impatience. The pulse in such cases is often near two hundred, tremulous and irregular; at length it can hardly be felt, the extremities become cold, and the patient soon expires. The patient sometimes falls into convulsions, which often prove the immediate forerunners of death.

The symptoms which mark a favourable termination of this complaint, are spontaneous sweats, a vomiting and diarrhoea, a discharge





of phlegm from the nose, and a copious sediment from the urine. Eruptions of little red blotches have been considered as a favourable symptom. Upon the whole, if the pulse becomes less frequent, fuller and more steady; the breathing less difficult and more regular; the peculiar ringing sound of the voice and cough diminishing, and the anxiety and oppression of the patient disappearing, the prognosis is favourable.

Yet an abatement of the symptoms are often delusive, for not unfrequently after the most flattering prospects, the hopes of the physician are at once blasted, by the symptoms returning with all their former violence; and unless speedily arrested, they terminate in



the death of the patient.

Dissections (according to Dr Rush) exhibit the following appearances in the trachea.

- 1<sup>st</sup>. A slight degree of inflammation.
- 2<sup>d</sup>. A thick matter resembling mucus.
- 3<sup>d</sup>. A Membrane similar to that which succeeds inflammation in the pleura and bowels, formed from the coagulating lymph of the blood.
- 4<sup>th</sup>. In some cases the trachea exhibits no marks of disease of any kind.

After having thus given a concise view of the nature and history of this disease, I will next proceed, only to mention those remedies which have been found most successful in the treatment of it. First,

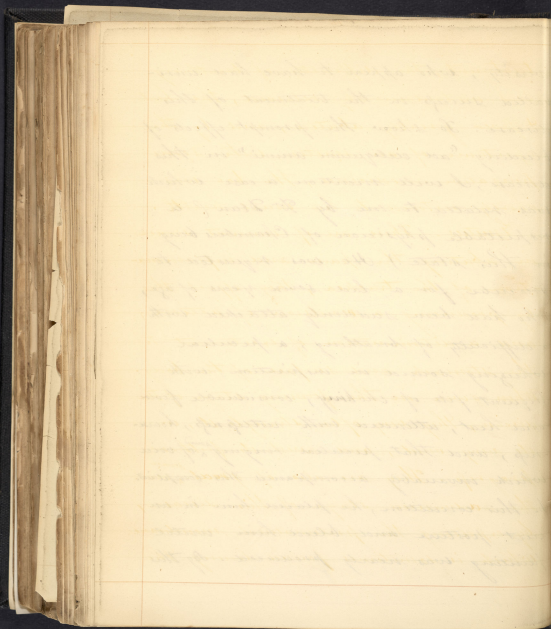
Venesection. This is extremely well



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calculated to reduce the action of  
the bloodvessels, which is so constantly  
an attendant upon this disease, and  
at the same time renders the operation  
of the medicines which are to follow  
more safe and efficacious. When blood is  
drawn in a sufficient quantity, so as  
to produce syncope, it relaxes that  
spasmodic stricture of the wind-pipe  
from which immediate suffocation is so  
often <sup>approaching</sup>. The quantity of blood to be  
drawn should be proportioned to the  
violence of the disease, habit of body,  
and age of the patient. Dr Bailie of  
New York was in the habit of bleeding  
his patients in this disease "ad deliquium  
animi", with complete success. The same  
appears to be the practice of several of  
the distinguished professors of this Uni-



-versity, who appear to have had unrivalled success in the treatment of this disease. To show the prompt effects of bleeding "*ad deliquium animi*" in this disease, I will mention a case which was related to me by Dr Dean (a respectable physician of Chambersburg in this state.) He was requested to prescribe for a lad seven years of age, who had been suddenly attacked with a difficulty of breathing, a peculiar wheezing sound in inspiration, with frequent fits of choking, considerable fever and heat, attended with restlessness, hoarseness, and that peculiar ringing <sup>sound</sup> of voice which invariably accompanies this complaint. In this condition, he placed him in an erect posture and bleed him until fainting was nearly produced. By this





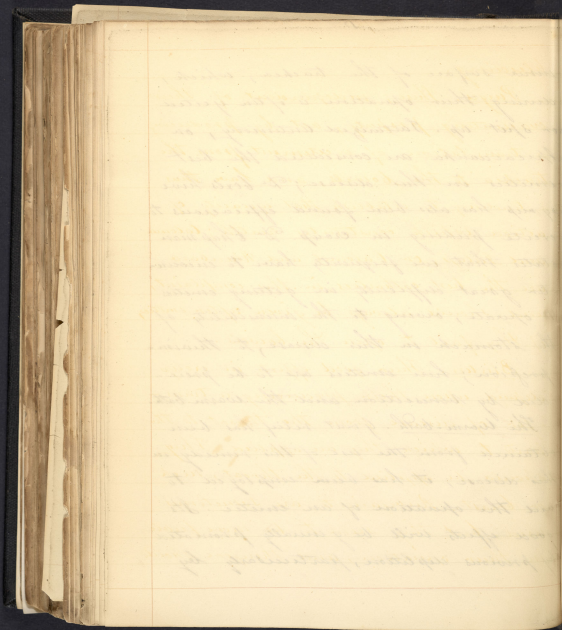
treatment, the difficulty of breathing was instantaneously relieved, the heat & fever greatly abated, and by the assistance of an emetic, with some purgative medicines, the boy was shortly restored to his usual health.

Emetics. These are of eminent service in abating the pain and inflammation of the trachea, they effect this by producing a revulsion of action, and a determination of excitement to the stomach and surface of the body. When given in the forming stage of the disease, they very often strangle it, in its very onset, and arrest its further progress. They are also of great <sup>service</sup> in the advanced stage of this disease, by expelling the protuberant membrane which is sometimes found lining the



inner surface of the trachea, which, during their operation is often ejected or spit up. Tartarized Antimony, or Spicaeantha are considered the best emetics in this disease; Dr Cox's hives syrup has also been found efficacious to excite puking in croup. Dr Chapman states that we frequently have to encounter great difficulty in getting emetics to operate, owing to the insensibility of the stomach in this disease, to their impression; here emetics are to be preceded by venesection and the warm bath.

The warm-bath. Great relief has been obtained from the use of this remedy in this disease; it has been employed to aid the operation of an emetic. Its good effects will be generally promoted by previous depletion, particularly by



bleeding.

Purges. These, independent of their evacuating property, act by producing a translocation of excitement from the trachea to the bowels, and have thus a tendency to establish that equality of action which constitutes health; Calomel and Salap, or Calomel and Rhubarb are the best cathartics in this complaint, and should always be given after emetics, if they fail to open the bowels.

Blisters. Their good effects in croup depend upon their producing a transfer of disease from the throat to the parts to which they are applied. They should be applied to the throat, neck or breast. Rubefacients are sometimes used, but they seem to be more feeble in their operation, and therefore should



not succeed blisters in this formidable disease

Calomel. Dr. Rush recommends this in large quantities. He relates a case in which Dr. Physick gave 30 grains of calomel to an infant three months old in the course of twenty four hours, Dr. Hamilton was in the habit of administering 100 grains to young children; and I find that Dr. Cartwright of Mississippi gave to a child four years old affected with croup, three grains of Tart. Emet. combined with a 100 grains of calomel at a dose, and at the expiration of twelve hours he gave a 100 grains of calomel more, with complete success. This would appear rash in the extreme, if we were not aware, (as I before mentioned) of the insensibility of







the stomach in croup, to the impregnation of all medicines; however Dr Chapman does not think it safe to recommend this practice. The efficacy of mercury in the cure of this disease seems to arise, from its creating a new disease, entirely different from the old one, already existing in the system.

It will appear evident from what I have said on the treatment of this disease, that I have only mentioned those remedies which are most successfully employed in the early stage of it; the subsequent treatment consists in expectorants, among which Dr Cox's hive syrup stands preeminent, likewise the Polygal-a Seneca has been highly recommen-

the treatment in cases of the impig-  
ment of the blood, known to be  
the most effectual, it is to be  
the practice. The object of  
in the case of the disease, to  
prevent it from becoming a  
chronic, instead of different from the  
acute, already existing in the  
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-mended by Dr. Archer of Maryland, who thought it adapted to every form and stage of this disease. Sometimes prescribing it as an emetic, and under other circumstances as an expectorant. Dr. Caldwell says "that in protracted cases, where the debility was great, and vomiting therefore being inadmissible, he has used a strong decoction of the seneka with much success". But the most correct opinion with respect to the employment of this remedy appears to be, that its use should be restricted to the ultimate stages of the disease, and as an expectorant.

Having now finished what I have to say on the history and treatment of this disease, I will just make a cor-

...by P. Fisher of New York,  
...thought it expedient to copy from  
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...it as an exercise, and  
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...P. Fisher says "that  
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...is not great, and sometimes there  
...are being insensible, in his own  
...during the action of the hands with  
...suecess." But the most correct  
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...of the copy appear to be  
...to me that I intend to the  
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...from your friends. What I have  
...on the history and progress of  
...I will put under a cover

-cluding remark, upon an erroneous opinion which appears to be prevalent with respect to the treatment of diseases in children. It is supposed by some practitioners that children are not able to bear very powerful remedies; but daily experience convinces us that they display uncommon tenacity of life, often living under circumstances that would destroy adults - They stand the operation of Emetics, Purges, Blisters, Emetics and even Venesection better; and further, they notoriously recover from wounds and surgical operations much better than adults.

